Volume Formulas for 3D Shapes

Today's Standard

8.G.C9 - Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.

Cues	Notes
Volume	Volume is the amount of space inside a 3D shape.
Cone	Cone volume formula: $V = (1/3)\pi r^2 h$
Cylinder	Cylinder volume formula: $V = \pi r^2 h$
Sphere	Sphere volume formula: $V = (4/3)\pi r^3$
Real-world applications	Use volume formulas to solve real-world problems like finding the capacity of containers.
Common misconceptions	Misconceptions include confusing formulas and incorrect value substitution.

Summary

Understanding and applying the volume formulas for cones, cylinders, and spheres is essential for solving real-world problems involving these shapes. Common misconceptions can be addressed through visual aids and guided practice.